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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/092,095

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Brian Bates

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EXAMINER

SEVERSON, RYAN J

ART UNIT

PAPER NUMBER

3731

MAIL DATE

DELIVERY MODE

02/17/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/092,095	Applicant(s) BATES, BRIAN	
	Examiner Ryan J. Severson	Art Unit 3731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 40-47, 73-79, 82-85 and 88-90 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 40-47, 73-79, 82-85 and 88-90 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____. | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) <input type="checkbox"/> Notice of Informal Patent Application
6) <input type="checkbox"/> Other: _____. |
|---|---|

DETAILED ACTION

Claim Objections

1. Claim 85 is objected to because of the following informalities: Claim 85 is written to depend from claim 87, which is a cancelled claim. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 40-47, 73-79, 82-85 and 88-90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Summers (6,080,191) in view of Herweck et al. (6,010,529), Lentz et al. (5,843,166), and McCrory (5,951,599).** Summers discloses several stent patterns (see figures 1-5 and 21). The embodiment of the stent in figures 1-5 is formed from a single wire (column 3, line 65), has ring segments joined by curved regions, and adjacent rings are interleaved. The embodiment in figure 21 has a longitudinal support and is formed from a flat sheet of material. Summers states that a graft material may be attached to any of the disclosed stent frames to seal an aneurysm (column 11, lines 25-52), but Summers fails to disclose the means of attaching the graft to the stent frame.
4. Attention is drawn to Herweck et al., who teach attaching a graft to a stent by folding the ends of the graft over the stent (see figures 3A-3C). Therefore, it would have been obvious to configure the graft of Summers in the manner taught by Herweck et al.

to provide a secure connection between the stent and graft. This configuration minimizes the contact between the stent and blood.

5. The combination of Summers and Herweck et al. as set forth above fails to disclose the layers of the graft (in the folded portion) are affixed to one another and not to the stent. Attention is drawn to Lentz et al., who teaches attaching inner and outer layers of graft material to one another and not the stent (see figure 3) to prevent generation of shear forces on the layers of the graft, thus preventing delamination of the layers of the graft or tearing of the graft (see column 5, line 66 through column 6, line 5). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have secured the double-layer portion of the folded graft of the combination of Summers and Herweck et al. to one another and not to the stent in the manner taught by Lentz et al. to prevent delamination or tearing of the graft.

6. The combination of Summers, Herweck et al., and Lentz et al. as set forth above does not disclose the graft material only covers a portion of the stent circumference and only an intermediate portion of the stent length. Attention is drawn to McCrory, who teaches a graft can extend only a partial circumference and partial length (as in figure 2A) to be intended to treat an aneurysm. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the graft of the combination extend only about $1/4^{\text{th}}$ of the circumference and an intermediate portion of the length of the stent, as taught by McCrory, to allow the graft to seal an aneurysm from the vessel.

7. Regarding claim 73, Examiner contends suturing the layers of graft material together would be an obvious alternative to the bonding connection taught by Lentz et al.

8. Regarding claims 76, 77, 82, 83, and 88-90, the combination of Summers, Herweck et al., Lentz et al., and McCrory as set forth above fails to disclose radiopaque markers on the stent. However, Examiner contends using radiopaque markers on stents is well-known and within the level of one of ordinary skill in the art to help position stents in the proper location.

9. Further regarding claims 76, 77, 82, 83, and 88-90, the combination does not disclose the specific location/orientation of the radiopaque markers. However, Examiner contends the placement of the radiopaque markers would have been obvious to try to one of ordinary skill in the art because the location of markers would be used to determine the orientation of the graft (which, as set forth above, only extends a partial circumference of the stent). Since this orientation would be required to, for example, seal an aneurysm, it would have been obvious to locate the markers as claimed to allow proper positioning of the stent and graft relative to the aneurysm.

Response to Arguments

10. Applicant's arguments filed 11/3/2009 have been fully considered but they are not persuasive. Applicant argues the combination does not disclose the graft material secured at its ends around first and second intermediate frame threads which are not at the ends of the support frame. However, McCrory teaches a graft material (22) disposed on a support frame (see column 4, lines 12-18) along only a partial length and

partial circumference (as shown in figure 2A). This teaching, in combination with the graft folding teaching of Herweck et al. and the securement method (i.e. securing layers of graft material to one another and not the stent) of Lentz et al. would lead one having ordinary skill in the art at the time of the invention to have disposed the graft material of Summers around an intermediate length and partial circumference of the support frame (as taught by McCrory) by folding the ends of the graft material over the support frame threads (as taught by Herweck et al.) and securing the two layers of the graft to one another and not the support frame (as taught by Lentz et al.). Therefore, the arguments are deemed not persuasive and the combination of references is maintained.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

12. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan J. Severson whose telephone number is (571) 272-3142. The examiner can normally be reached on Monday - Friday 8:30-5:00.

14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan Nguyen can be reached on (571) 272-4963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ryan J. Severson/
Examiner, Art Unit 3731
2/15/10

/Anhtuan T. Nguyen/
Supervisory Patent Examiner, Art Unit 3731
2/15/2010